REMARKS/ARGUMENTS

Status of Claims

Claims 1-7, 10, 13-16, and 19-22 stand rejected.

Claims 8, 9, 11, 12, 17, and 18 stand objected to.

Claims 1, 7, 9, 11, and 17 are currently amended.

Claims 6, 10, 19, 21, and 22 are hereby canceled.

Claims 23-26 are new.

Thus, claims 1-5, 7-9, 11-18, 20, and 23-26 are pending in this patent application.

The Applicants hereby request further examination and reconsideration of the presently claimed application.

Allowable Subject Matter

Claims 8, 9, 11, 12, 17 and 18 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. New claims 23, 25, and 26 are independent claims written to mirror the independent forms of previous claims 8, 9, and 11, respectively, with the exception that the fast forwarding class has been replaced by the expedited forwarding class. New claim 24 depends from independent claim 23, and mirrors previous claim 17. Thus, new claims 23-26 are allowable.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 4, 13, 14, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 7,362,975 (*Choi*) in view of U.S. Patent Application Publication 2003/0190168 (*Song*). Claims 2, 3, and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Choi* in view of *Song* and U.S. Patent No. 6,956,854 (*Ganesh*). Claim 6 stands rejected under 35

U.S.C. § 103(a) as being unpatentable over *Choi* in view of *Song* and U.S. Patent 7,443,861 (*Lee*). Claims 7, 10, 15, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Choi* in view of *Song*, *Lee*, and U.S. Patent 6,978,144 (*Choksi*). Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Choi* in view of *Song* and further in view of *Ganesh* and U.S. Patent 6,987,753 (*Liu*). Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Choi* in view of *Song*, *Lee*, *Choksi*, and *Liu*. Claims 6, 10, 19, 21-22 have been canceled, and claims 2-5, 7-9, 11-18, and 20 depend from independent claim 1. Thus, claims 1-5, 7-9, 11-18, and 20 stand or fall on the application of the combination of *Choi* and *Song* to independent claim 1. The United States Supreme Court in *Graham v. John Deere Co. of Kansas City* noted that an obviousness determination begins with a finding that **"the prior art as a whole in one form or another contains all" of the elements of the claimed invention**. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 22 (U.S. 1966). The Applicants respectfully assert that the combination of *Choi* and *Song* fails to disclose all of the limitations set forth in independent claim 1, and consequently does not render obvious claims 1-5, 7-9, 11-18, and 20.

The combination of *Choi* and *Song* fails to render obvious claims 1-5, 7-9, 11-18, and 20 because the combination of *Choi* and *Song* fails to disclose that the granting information of service ports carrying services among the automatic detecting MPCP message service, the non-automatic detecting MPCP message service, the MF service, the Assured Forwarding service and the Best-Effort Forwarding service does not comprise the start time of data transmission. Claim 1 reads:

1. A method for dynamic bandwidth allocation in a Passive Optical Network (PON), said PON includes an OLT and a plurality of ONUs accessing to the OLT, comprising:

a) classifying, by the OLT, services which are to be communicated between the OLT and an ONU into a plurality of service types according to different transmitting requirements, and granting a different priority to each type of the services, said services being classified by priority in descending sequence as Expedited Forwarding (EF) service, automatic detecting MPCP message service, non-automatic detecting MPCP message service, MF service, Assured Forwarding service and Best-Effort Forwarding service;

b) authorizing, by the OLT, a service port of every type of services to transmit service data in descending sequence of said priorities of the services, and **recording granting information of the service ports obtained from the authorization**, the granting information of an EF service port comprising a start time of data transmission and **the granting information of service ports carrying services among the automatic detecting MPCP message service, the non-automatic detecting MPCP message service, the MF service, the Assured Forwarding service and the Best-Effort Forwarding service not comprising the start time of data transmission;**

c) reading out, by the OLT, said granting information of every to-be-granted service port of the same ONU; and

d) scheduling, by the OLT, start time of granted data transmission of every to-be-granted service port of current ONU, generating a downlink granting message including both said granting information and said start time of granted data transmission of every granted port of said current ONU, allocating adjacent granted windows for service ports different from the EF service port of the same ONU when generating the downlink granting message, and transmitting said downlink granting messages to said current ONU.

(Emphasis added). Support for the amendments to claim 1 is found in original claims 6 and 9 and paragraph 126 of the specification. As shown above, claim 1 requires that the granting information of service ports carrying services among the automatic detecting MPCP message service, the non-automatic detecting MPCP message service, the MF service, the Assured Forwarding service and the Best-Effort Forwarding service **does not comprise the start time of data transmission**. In contrast, *Choi's* **granting information for all of his data classes comprise the start time of data transmission**:

> When information on queue states of every ONUs is obtained, a grant generator 211 generates a service-based bandwidth for each of the ONUs, and transmits a control message for upstream bandwidth allocation (GATE) to each of the ONUs.
>
> As shown in FIG. 3b, <u>the GATE message PDU includes</u> <u>grant level, grant length, and **start time** of a granted timeslot</u> of upstream bandwidth.

Choi, col. 5, ll. 9-13 & 34-45 (emphasis added). As shown above, *Choi's* granting information for all of his data classes comprise the start time of data transmission. *Song* fails to discuss whether his granting information comprises the start time of data transmission. Thus, the combination of *Choi* and *Song* fails to disclose that the granting information of service ports carrying services among the automatic detecting MPCP message service, the non-automatic detecting MPCP message service, the MF service, the Assured Forwarding service and the Best-Effort Forwarding service not comprising the start time of data transmission. As such, the combination of *Choi* and *Song* fails to disclose all of the elements of independent claim 1, and consequently fails to render obvious claims 1-5, 7-9, 11-18, and 20.
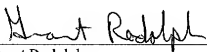
CONCLUSION

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections and objections is respectfully requested by the Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated October 27, 2009 has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C., Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,
CONLEY ROSE, P.C.

Date: 1/26/10

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